

Information for Sine-Wave Testing Equipment Program

25X1A The following summaries general types of equipment whose optical system performance we would like to be able to measure (singly or in combination with other pieces of equipment) with [REDACTED] Sine-Wave Testing device:

1. Direct Viewers:

- A. Common light tables with cold cathode grid. Light [REDACTED] 25X1A
tables with modulating illumination (e.g. [REDACTED]
dodging principle)
- B. Tube magnifiers -- monocular and binocular
- C. Stereo microscopes -- capable of zoom magnification;
[REDACTED] 25X1D
- D. Microstereoscopes -- Dual-viewing instruments; used with anamorphic
eyepieces
- E. Virtual image viewer
- F. Fiber optic stereoviewer (essentially, an over-sized
microscope with fiber optic relays)

2. Rear-Projection Viewers:

- A. Conventional Richardson^g film viewers
- B. Viewers with modulating illumination (automatic
dodging capability)
- C. Viewers with measurement capability

3. Projectors:

- A. Transparency projectors
- B. Opaque projectors

4. Screens:

- A. Rear or front projection using unconventional materials.

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5. Measuring Tools:

Macrosopes, comparators -- ~~optics~~ similar to microscopes and stereoscopes.

6. CRT Viewers -- screen or direct viewing; monoscopic or stereoscope

A. Rectifying viewer: electronic stereoscope

7. Enlargers:

A. Conventional

B. Coherent light

C. Rectifying printers -- optical and electro-optical; optomechanical

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NOT TO BE DISCLOSED
WITH [REDACTED] ON 12 APRIL 1965
by NAJOF [REDACTED]

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SPECIFICATIONS FOR SINE-WAVE TARGETS (1020 1/mm)

1. Crenelate patterns of 15 line-pairs of which only the first harmonic will be used.
2. Therefore, it is important that at the higher frequencies the targets only be properly periodic and of known contrast: It is not necessary that the edges be sharp or well-defined.
3. In a square array there would be three groupings oriented in the same direction. The two most probable frequency ranges will be:

<u>A</u>	<u>B</u>
1 - 10	5 - 50
10 - 100	50 - 500
100 - 1000	500 - ?

4. Information needed from [REDACTED] 25X1A
 - a. Would they be interested, and would they be able to make such targets?
 - b. How much of an effort would be involved on their part; and how much use could they make of the techniques they are developing under our other contract?
 - c. How much time would be involved?
 - d. Estimate approximate fixed-price cost per target.